

**REMARKS**

Claims 1, 2, 4, 6-21, 24-38, 41-49, and 52-59 are currently pending in the subject application and are presently under consideration.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claims 1-2, 4, 6-14, 21, 24-31, 38, 41-44, 48-49, and 52-56 Under 35 U.S.C. §103(a)**

Claims 1-2, 4, 6-14, 21, 24-31, 38, 41-44, 48-49, and 52-56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214). Applicants' representative respectfully traverses the rejection of claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 under 35 USC § 103(a) as being unpatentable over Patterson in view of Lapaille.

As previously stated, the invention of Patterson is generally directed to satellite communications systems that can provide incremental global broadband services using Earth-fixed cells. Patterson is generally concerned with implementing scalable satellite systems comprising an increasing number of NGSO satellites. To this end, satellite communications between terminals and gateways through a satellite uplink are discussed generally. As part of this generalized discussion, Patterson cursorily raises aspects of a reverse link by stating, "The reverse link is the communication path from the user terminals in a service cell via the serving satellite to an associated gateway...In contrast to the forward link which has a single data source, the reverse link must support multiple user terminals transmitting simultaneously...The **gateway** uses a medium access control (MAC) layer protocol **to allocate these channel resources** (bandwidth and time slots) among user terminals **on demand**...The **gateway allocates resources among user terminals** based on the capacity requested by each user terminal, the available link capacity, and the waveforms that can be supported by the user terminal under the current link conditions...It may also be important for certain applications to maintain link availability as high as possible. This can be accomplished by changing to more robust waveforms at low bit rates when link conditions degrade." (See Patterson at [100]-[101]) *It is important to note that Patterson states that the GATEWAY allocates the resources and does not state that the terminal*

*allocates the resources based on a determination related to the metric information sent from the gateway.*

Thus, as also previously stated, in contrast to Patterson, the subject application addresses the return link specifically and at a level of detail not seen in Patterson. Generally, the subject application discloses compensating for noise in the reverse link without changing the interference relationship among a plurality of terminals employing the return link. To this end, the data rate can be adjusted and the transmission power levels can remain unchanged. The signal to noise ratio can be employed as a measure of the quality of the return link signal and used as a metric for determining how to adjust the data rate to compensate for changes in the link conditions. This metric can be communicated to the terminals by the gateway. The terminals can then determine how to allocate resources based at least in part on the information of the metric.

Therefore, as claimed in independent claims 1, 21, 38, and 49, a change in the return link signal quality can be identified **at a gateway**, wherein the change can be related to the change in the signal to noise ratio, **this metric is sent** by the gateway and received **at a terminal** (a metric containing information is sent, this is not an instruction to adjust the resources), and the data rate can be **adjusted by the terminal** based on the indicated change in the return link signal (*e.g., the terminal can evaluate the metric and determine how to allocate the resources*). This is in stark contrast to the explicit, albeit cursory, disclosure of Patterson, wherein, “The gateway uses...MAC layer protocol to allocate...channel resources...among terminals” (*see Patterson at [0101]*) and, “**The gateway allocates resources among user terminals...**” (*Id.*, emphasis added) Applicants' representative respectfully requests that the Examiner reconsider his position in light of the plain meaning of Patterson's words wherein Patterson asserts that control and decision making over adjustments to the return link parameters is performed by the gateway as compared to the present invention in which such control and decision making is based in the terminal. Where *Patterson states explicitly that the gateway controls* return link parameter decision making, Patterson does not disclose this same decision making control in the terminals, and thus does not disclose each and every element of the invention as claimed in the subject application. Even where, *arguendo*, Lapaille teaches identification of a change based on SNR for a link, this does not cure the failures of Patterson. Thus either alone or in combination, Patterson and Lapaille fail to make the claimed subject matter obvious under 35 U.S.C. § 103(a).

Further, the applicants' representative has asserted that Lapaille teaches away from the use of the use of the identified change and therefore where the reference must be considered in the entirety (the Examiner is not allowed to cherry pick selected portions of a reference) it cannot be properly combined with Patterson to show a similar user of the identified change.

[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious. *See KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007) *citing United States v. Adams*, 383 U. S. 39, 51-52 (1966).

“Under 35 U.S.C. 103 where the examiner has relied on the teachings of several references, the test is whether or not the references viewed individually and collectively would have suggested the claimed invention to the person possessing ordinary skill in the art. **It is to be noted, however, that citing references which merely indicated that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that the combination of claimed elements would have been obvious.** That is to say, there should be something in the prior art or a convincing line of reasoning in the answer suggesting the desirability of combining the references in such a manner as to arrive at the claimed invention... [I]t would not have been obvious to modify [the prior art] ... without using [the patent application’s] claims as a guide. It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness.” *Ex parte Hiyamizu*, 10 USPQ2d 1393 (BPAI 1988), emphasis added.

**A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.** *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), emphasis added.

Thus, merely arguing that Lapaille teaches that the change in the SNR indicates a change in the link quality is insufficient as it essentially ignores the remainder of the teachings of Lapaille. Lapaille continues to also teach that the link quality change indicated by the change in the SNR is to be corrected by changing the interference levels (*e.g.*, by changing the power levels) and thus cannot be read as obviating what is claimed in the subject application simply by selecting only a portion of Lapaille to combine with Patterson, namely, NOT changing the interference levels when adjusting the link quality based on observed changes in the SNR. Where Lapaille

teaches away from what is disclosed in the subject application, it is improper to combine selected portions of Lapaille with Patterson to attempt to show obviousness under 35 U.S.C. § 103.

Additionally, claims 2, 4, and 6-14 depend from claim 1, claims 24-31 depend from claim 21, claims 41-44 and 48 depend from claim 38, and claims 52-56 depend from claim 49, which are believed to be patentably distinct from Patterson as asserted *supra*. The rejection of dependant claims 2, 10-14, 26-31, 43-44, 48, and 55-56 under 35 U.S.C. §102(e) is therefore obviated where claims 1, 21, 38, and 49 are allowable. Applicants therefore respectfully request that the Examiner withdraw the rejection of claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 under 35 USC § 102(e) as being obvious over Patterson.

## **II. Rejection of Claims 17 and 34 Under 35 U.S.C. §103(a)**

Claims 17 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214), as applied to claims 1 and 21, and further in view of Hogberg et al. (US 6,198,730). Applicants respectfully disagree for at least the following reason. Independent claim 1, from which claim 17 depends and independent claim 21 from which claim 34 depends, are believed to be allowable over Patterson and/or Lapaille, as asserted *supra*. Hogberg does not correct these particular deficiencies. The rejection of dependant claims 17 and 34 under 35 U.S.C. §103(a) is thus obviated. Applicants respectfully request that the Examiner withdraw the rejection of claims 17 and 34 under 35 USC § 103(a) as being obvious over Patterson, in view of Lapaille, in further view of Hogberg.

## **III. Rejection of Claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 Under 35 U.S.C. §103(a)**

Claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214), as applied to claims 1, 21, 38, and 49, and further in view of Xie et al. (US 6,781,978). Applicants respectfully disagree for at least the following reason. Independent claim 1, from which claims 15-16 and 18-20 depend, independent claim 21, from which claims 32-33 and 35-37 depend, independent claim 38, from which claims 45-47 depend, and independent claim 49 from which claims 57-59 depend, are believed to be allowable over

Patterson alone or in combination with Lapaille, as asserted *supra*. Xie does not correct these particular deficiencies. The rejection of dependant claims 15-16, 18-20, 32-33, 35-37, 45-47 and 57-59 under 35 U.S.C. §103(a) is thus obviated. Applicants respectfully request that the Examiner withdraw the rejection of claims 15-16, 18-20, 32-33, 35-37, 45-47 and 57-59 under 35 USC § 103(a) as being obvious over Patterson, in view of Lapaille, in further view of Xie.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [QUALP802USA].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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